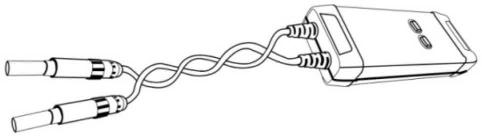
5 Best Practices:

1) Twisting the input leads together can help reduce noise and improve the probe's high frequency response when measuring signals. Please view the diagram below for an example:



2) Extending the input leads may introduce more noise during measurement. If extra extension lead is necessary, please ensure the extension leads are of equal length and the input signal frequency is under 10MHz. Otherwise, measurement errors may occur.

3) While measuring a high frequency signal, don't touch the end of the input lead with your hand or other objects. Otherwise, it may affect the accuracy of the measurement.

4) Ensure that you use an oscilloscope with an input impedance of at least 1MΩ and bandwidth of at least 100MHz.

5) Turn on the oscilloscope or externally powered instrument and let the probe and equipment warm up for 20 minutes.

6) When a substantial change in temperature or other circumstances affect the accuracy of the probe's zero point, a calibration is needed: short the input terminals of the probe, then power the probe while simultaneously pressing the Attenuation Range Buttons/Indicators for three seconds.

6 Warranty

Micsig warrants that this probe will be free from defects in materials and workmanship for a period of one (1) year and accessories for a period of six(6) months from the date of shipment. If any such product proves defective during this warranty period, Micsig, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product. Parts, modules and replacement products used by Micsig for warranty work may be new or reconditioned to like new performance. All replaced parts, modules and products become the property of Micsig.

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Micsig

DP10007/DP10013/DP20003

High Voltage Differential Probe
User Manual



DP10007



DP10013



DP20003

General Usage Summary

Connecting the probe: First, connect the probe's USB power input to a USB power source such as the oscilloscope's USB port and connect the probe's BNC connector to an oscilloscope input. Then, set the proper attenuation rate and connect the probe input to the device st.

Disconnecting the probe: First, disconnect the probe inputs from the device under test, and then unplug the probe output and power input.

Use proper grounding: To avoid an electric shock, all devices that require grounding must be connected to earth ground. Before making connections to the input or output terminals of the probe, ensure that the test instrument is properly grounded if necessary.

Measurement safety: Always be aware of the voltage rating of the probe and the measurement accessories you are using and of the maximum amplitude of the signal you intend to measure. Never apply a potential that exceeds the voltage ratings of the probe and/or its accessories to avoid damaging the product and creating a hazardous situation.

Only qualified personnel should perform service on this product.
Do not touch exposed connections and components when power is present.

If an over-range condition occurs, please disconnect power and signal input from the probe immediately.

Do Not Operate in an Explosive Atmosphere.

Do Not Operate in Wet/Damp Conditions.

Keep Product Surfaces Clean and Dry.

Please read this manual carefully before use!

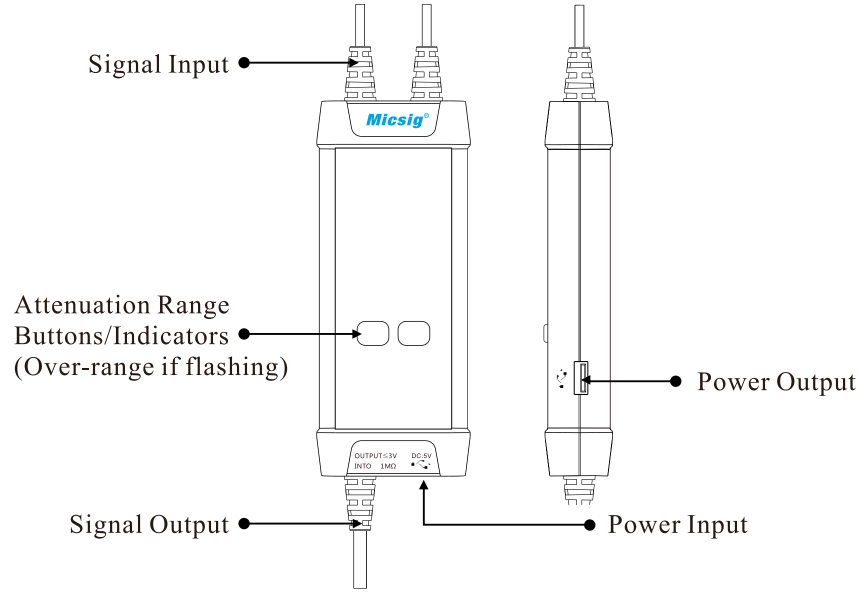
1 Introduction

Micsig DP series differential probe can convert the input high voltage differential signal into single-ended Low-voltage signal, and display through the oscilloscope. Available with low and high attenuation option, the differential measurement voltage can reach up to 700V/ 1300V/5600V.

2 Specification

Model	DP10007	DP10013	DP20003
Bandwidth	100MHz	100MHz	100MHz
Rise Time	⩽3.5ns	⩽3.5ns	⩽3.5ns
Attenuation	10X 100X	50X 500X	200X 2000X
Gain accurecy	±1%	±2%	±2%
Maximum Differential Test Voltage (DC+AC PK)	70V (10X) 700V (100X)	130V (50X) 1300V (500X)	560V (200X) 5600V (2000X)
Maximum input common mode voltage	CAT II 600V CAT I 1000V	CAT II 1000V	CAT III 1000V
Input referred noise	≤15mVrms(10X) ⩽60mVrms(100X)	≤40mVrms(50X) ⩽230mVrms(500X)	≤160mVrms(200X) ⩽920mVrms(2000X)
Common Mode Rejection Ratio	⩽-80dB@50Hz ⩽-50dB@1MHz ⩽-60dB@20KHz ⩽-40dB@10MHz	>80db(DC) >60db(100KHz) >50db(1MHz)	>80db(DC) >60db(100KHz) >50db(1MHz)
Input Impedance	8MΩ/1.25pF(differential) 4MΩ/2.5pF(single-ended to ground)	10MΩ/1pF(differential) 5MΩ/2pF(single-ended to ground)	50MΩ/1.25pF(differential) 25MΩ/2.5pF(single-ended to ground)
Output Voltage	⩽7V	⩽3V	⩽3V
Power	1.25W	0.85W	0.85W
Power Supply	DC 5V,USB Supply		
Overrange Alarm	Button light flashes		
Dimension	14.5cm*6cm*2.7cm		
Input cable length	Approx 45cm		
Output cable length	Approx 90cm		
Operating Temperature	0℃~40℃		
Operating Humidity	10%~85%		

3 Panel Description



4 Making Measurements

1) **Powering the probe:**
Connect the USB input of the probe to the USB port of the oscilloscope or a suitable USB power source.

2) **Connecting the probe to the oscilloscope:**
Connect the probe output BNC to the oscilloscope channel input.
Note: make sure the oscilloscope is properly grounded if necessary.

3) **Set the appropriate attenuation range according to the measured voltage.**

4) **Connecting the input to the device under test:**
Using the appropriate input accessory, connect the probe to the device under test to start the measurement. If the attenuation range indicator flashes (indicating over-range), please immediately disconnect the power and input.

5) **Set the measuring instrument.**